FOX HD-SDI

Fiber Optic Extender for Multi-Rate SDI

FEATURES

- **Extends SDI, HD-SDI, and 3G-SDI signals very long distances over a single fiber** — The FOX HD-SDI supports multi-rate SDI at rates up to 2.97 Gbps, and complies with SMPTE 259M, 292M, 424M, and ITU digital video standards.
- **Input: BNC connector**
- **Outputs: Two BNC connectors**
- **Passes embedded audio, ancillary ID and metadata information, and SD/HD-SDTI digital video signals** — Passes all data allowed within published SMPTE and ITU digital video standards, including embedded audio, ancillary ID and metadata information, and SDTI (SMPTE 305M) and HD-SDTI (SMPTE 348M) digital video signals.
- **Input equalization and reclocking on buffered outputs** — The FOX HD-SDI automatiy equalizes incoming multi-rate SDI signals, and reshapes and restores signals on its buffered outputs.
- **Dual buffered outputs** — Provide additional system capability. When the FOX HD-SDI is configured as a dedicated transmitter, the outputs can also be used for previewing on a local monitor.
- **Daisy-chain capability** — When configured as a dedicated receiver, multiple FOX HD-SDI units can be daisy-chained so that displays in multiple locations can be served from a single transmitter location.
- **Multi-rate SDI transceiver sends to and receives from a second FOX HD-SDI unit over fiber in bi-directional transceiver mode**
- **Real-time status LED indicators for troubleshooting and monitoring**
- **Available as a 850 nm multimode model for moderate-range transmissions, and a 1310 nm singlemode model for extreme distances up to 30 km (18.75 miles)**
- **Industry standard LC connectors provide reliable physical connectivity and precise fiber core alignment**
- **1" (2.5 cm) high, quarter rack width metal enclosure** — With a low profile enclosure, the FOX HD-SDI can be conveniently and discreetly installed in a variety of locations.
- **External universal power supply included, replacement part # 70-775-01** — Provides worldwide power compatibility.

DESCRIPTION

The Extron **FOX HD-SDI** Fiber Optic Extender enables long haul transmission of multi-rate SDI video, with embedded audio and metadata, over a single fiber. Engineered for reliability and exceptional high resolution image performance, it uses Extron's exclusive all digital, zero compression technology to transmit multi-rate SDI signals up to 2.97 Gbps including SDI, HD-SDI, and 3G-SDI. To optimize SDI signal transmission to and from the FOX HD-SDI, input signals are automatiy equalized, and output signals are reclocked. The FOX HD-SDI can function as a transmitter and a receiver in various user-configurable modes. It is ideally suited for use in digital signage, broadcast and production, rental and staging, and medical applications.

The FOX HD-SDI is designed for long distance transmission of high resolution content with the highest quality. Because transmission of content is inherently secure and immune to outside interference, fiber applications are favored in government, military, and medical environments. The FOX HD-SDI features industry standard LC-type connectivity.

The FOX HD-SDI MM supports multimode fiber at 850 nm, which is typiy used within buildings or facilities with moderate-range transmission distances up to 500 m (1,640 feet). The FOX HD-SDI SM supports singlemode as well as multimode fiber at 1310 nm. Singlemode fiber offers long-range transmission capability over extreme distances of up to 30 km (18.75 miles). It is used in very large facilities such as airports and stadiums, and for connecting over very long distances between facilities such as university campuses.

The FOX HD-SDI automatiy recognizes and transmits SDI, HD-SDI, and 3G-SDI signals, and is compliant with SMPTE 259M, 292M, 424M, and ITU digital video standards. Because the FOX HD-SDI is a transceiver, multi-rate SDI signals can be simultaneously transmitted and received between a pair of FOX HD-SDI units. It is also configurable as a dedicated transmitter with outputs for previewing on a local monitor, and as a dedicated receiver with the capability to daisy-chain multiple units for supporting displays at multiple locations. Housed in a 1" high, quarter rack width enclosure, the FOX HD-SDI can be conveniently installed in various locations.

MODEL	VERSION DESCRIPTION	PART #
FOX HD-SDI MM	Multimode, Qty. 1	60-900-01
FOX HD-SDI SM	Singlemode, Qty. 1	60-901-01

Note: Two FOX HD-SDI units are required to establish a link for sending and receiving multi-rate SDI signals. The FOX HD-SDI is not compatible with the FOX 500, FOX 500 DVI, FOXBOX 4G VGA, or FOXBOX 4G DVI Fiber Optic Extenders, or the FOX 500 DA6 Fiber Optic Transmitter/Distribution Amplifier.

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Extron®

FOX HD-SDI

SPECIFICATIONS

NOTE: The FOX HD-SDI is a transceiver that can function as a transmitter and/or as a receiver. Two units are required for a transmitter-receiver system with one fiber optic cable linking the two units. The FOX HD-SDI is available in singlemode or multimode versions.

NOTE: These transceivers are class 1 laser products. They meet the safety regulations of IEC-60825, FDA 21, CFR 1040.10, and FDA 21 CFR 1040.11.

OPTICAL FIBER INTERCONNECTION BETWEEN TRANSMITTER AND RECEIVER

Number/type ..... 1 fiber optic

NOTE: Only one fiber is required to transmit video and embedded audio and unidirectional data.

Connectors ..... 1 LC connector
Operating distance ..... 30 km (18.75 miles) with singlemode (SM) cables with a FOXHD-SDISM
500 m (1640') with multimode (MM) cables with a FOXHD-SDIMM

NOTE: Operating distance is approximate. These are typical distances. The maximum distance may be greater than these typical numbers depending on factors such as fiber type, fiber bandwidth, connector splicing, losses, modal or chromatic dispersion, environmental factors, and kinks.

Nominal peak wavelength ..... 850 nm for FOXHD-SDI MM; 1310 nm for FOXHD-SDI SM
Transmission power
Singlemode ..... -5 dBm, typical
Multimode ..... -5 dBm, typical
Maximum receiver sensitivity
Singlemode ..... -18 dBm, typical
Multimode ..... -12 dBm, typical
Optical loss budget
Singlemode ..... 13 dB, maximum
Multimode ..... 7 dB, maximum

VIDEO

Signal type ..... HD-SDI, SDI, and 3G-SDI digital video signals
Gain ..... Unity
Resolution ..... 8 or 10 bits, automatic
Data rates ..... 270 Mbps, 1.485 Gbps, 2.970 Gbps
Operation standards ..... SMPTE259M-C, SMPTE292M, SMPTE424M, ITU-RBT.601, ITU-RBT.1120, DVB-ASI
Auto data rate lock ..... Yes

VIDEO INPUT — TRANSMITTER

Number/signal type ..... 1 single link SDI, HD-SDI, or 3G-SDI digital component video
Connectors ..... 1 female BNC
Data rates ..... 19 Mbps to 2.97 Gbps
Nominal level ..... 0.8 Vp-p
Minimum/maximum levels ..... 0.5 V to 1 Vp-p with no offset
Impedance ..... 75 ohms
Return loss ..... <-15 dB @ 5 MHz to 2.97 GHz
DC offset (max. allowable) ..... 5 V
Input coupling ..... AC
Input cable equalization ..... Automatic for up to -30 dB of cable loss
HD-SDI ..... 120 m (400') using Extron RG6 cable
90 m (300') using Extron RG59 cable
SDI ..... 150 m (500') using Extron RG6 cable
120 m (400') using Extron RG59 cable

NOTE: The transmission distance varies depending on the signal resolution and on the type of cable, graphic card, and display used in the system.

VIDEO OUTPUT — RECEIVER

Number/signal type ..... 2 single link SDI, HD-SDI, or 3G-SDI digital component video
Connectors ..... 2 female BNC
Re-clocking ..... Automatic for 270 Mbps, 1.485 Gbps, 2.97 Gbps, or bypassed for unrecognized rates
Nominal level ..... 0.8 Vp-p
Minimum/maximum levels ..... 0.5 V to 1.0 Vp-p
Impedance ..... 75 ohms
Return loss ..... <-25 dB @ 100 MHz
DC offset ..... ±5 mV with input at 0 offset

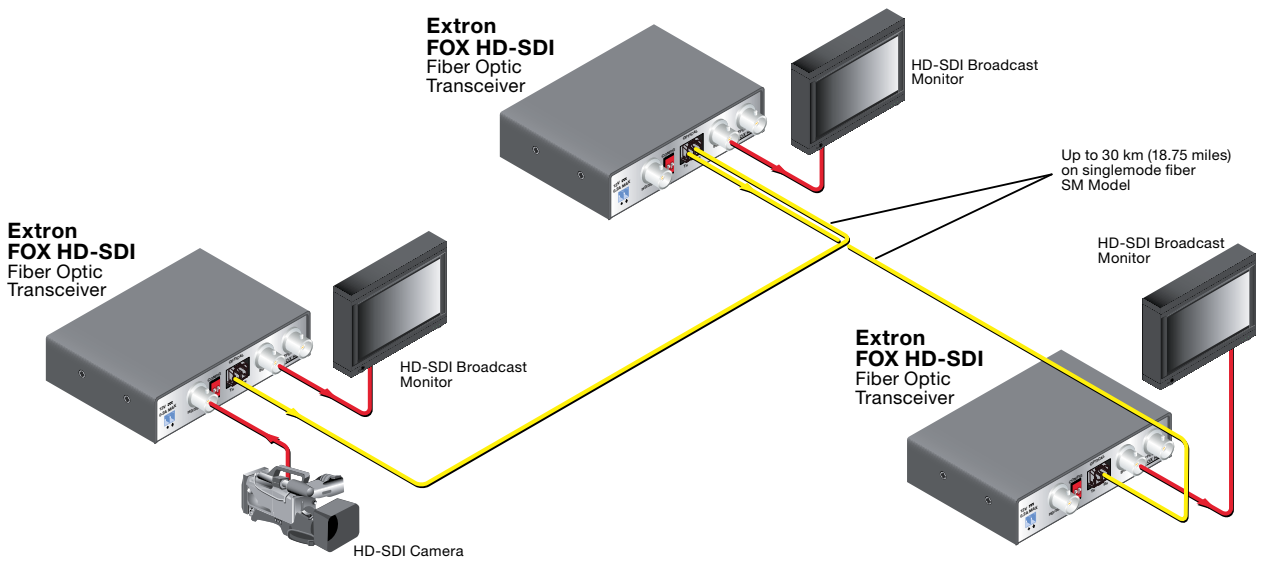
GENERAL

External power supply ..... 100 VAC to 240 VAC, 50/60 Hz, 6 watts, external; to 12 VDC, 1 A, regulated
Power input requirements ..... 12 VDC, 0.3 A
Temperature/humidity ..... Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing
Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing
Cooling ..... Convection, unvented
Rack mount ..... Yes, with optional 1U, 9.5" deep rack shelf, part #60-190-01 (RSU 129) or 60-604-01 (RSB 129); 1U, 6" deep rack shelf, part #60-190-10 (RSU 126) or 60-604-10 (RSB 126); or VersaTools® 1U, 3.5" deep rack shelf, part #60-190-20 (RSF 123) or 60-604-20 (RSB 123)
Furniture mountable with optional Through-Desk Mounting Kit, #70-077-02 (MBD 129); or Under-Desk Mounting Kit, #70-077-01 (MBU 125)
Attachable to a projector mount with optional kit, part #70-526-02 (PMK 250) or 70-077-04 (PMK 200)
Enclosure type ..... Metal
Enclosure dimensions ..... 1.0" H x 4.3" W x 3.0" D (quarter rack wide)
2.5 cm H x 10.9 cm W x 7.6 cm D
(Depth excludes connectors.)
Product weight ..... 0.5 lb (0.3 kg) per each unit
Shipping weight ..... 3 lbs (2 kg) per each unit
Vibration ..... ISTA 1A in carton (International Safe Transit Association)
Listings ..... UL, CUL
Compliances ..... CE, FCC Class A, VCCI, AS/NZS, ICES, FDA Class 1
MTBF ..... 30,000 hours
Warranty ..... 3 years parts and labor

NOTE: All nominal levels are at ±10%.

NOTE: Specifications are subject to change without notice.

Note: For complete specifications, please go to www.extron.com



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